

Australia ranks 11th in the 26 countries that planted biotech crops in 2016, when 852,000 hectares were planted to biotech cotton and canola.

In 2016, Australia planted 852,000 hectares of biotech crops, a 29% increase from 658,000 hectares in 2015. This area was comprised of 405,000 hectares biotech cotton and 447,000 hectares biotech canola.

Biotech cotton has been grown in Australia since 1996. In 2016, biotech cotton had an adoption rate of 98%; 405,000 hectares out of the 413,000 total cotton area was biotech.

There was an unprecedented increase of almost 90% (190,000 hectares) from 214,000 in 2015 to 405,000 hectares in 2016 in biotech cotton plantings as weather and water conditions improved in cotton planting states.

Stacked traits IR/HT was at 97% and IR at 3%, with the introduction of Bollgard III/RR®Flex. This stacked event contains three different insect resistant genes combined with herbicide tolerance. Australian cotton growers were the first in the world to benefit from Bollgard



III/RR®Flex. Australian cotton is exported to China, Indonesia, and Thailand.

2016 was the 9th consecutive year that HT canola was planted in Australia. HT canola was planted on 23% (447,725 hectares) of the total canola area of 1.95 million hectares. The crop was grown in three states: New South Wales (NSW), Victoria and Western Australia. Biotech canola adoption increased in 2016 to 23% (447,725 hectares) compared to 22% (436,534 hectares) in 2015.

Farmers in Western Australia grew 346,000 hectares (30% of total canola) of biotech canola, 46,582 hectares (16%) in Victoria, and 55,143 hectares (11%) in NSW.

A 3% increase in the adoption rate was obtained in Victoria which elevated the national adoption rate to 23%. There is a potential 1.5 million hectares in Australia that would be planted to biotech canola for the benefit of the farmers and consumers in the country.



ADOPTION OF BIOTECH CROPS

More than 1,000 farmers planted biotech canola in 2016, with more than 180 growers planting it for the first time. Research conducted by Brookes and Barfoot in 2016 reports that since 2008, the average yield gain from biotech canola technology is 11%. This resulted in an additional 226,000 tonnes of canola produced in Australia.

Australia has approved a total of 119 biotech events for food, feed, and cultivation including alfalfa (3 events), Argentine canola (21), carnation (12), cotton (24), maize (27), potato (10), rice (1), rose (1), soybean (17), sugar beet (2), and wheat (1).

In 2016, Australia granted food approvals for the following maize events: stacked HT MON87419 and MZHG0JG, stacked IR/HT MZIR098, increased ear biomass event MON87403, as well as insect resistant soybean MON87751.

Seven canola events were granted food, feed, and cultivation approvals including stacked HT: HCN92 x MON88302 and HCN28 x MON88302; HT + PC – fertility restorer RF1 x MON88302, RF2 x MON88302 and MON88302 x RF3; and HT + PC – male sterility MS1 x MON88302 and MS8 x MON88302.

Research is being conducted on other biotech crops, with field trials controlled by The Office of the Gene Technology Regulator (OGTR). These crops include: bananas, barley, canola, cotton, grapevines, Indian mustard, maize, papaya, perennial ryegrass, pineapple, safflower, sugarcane, tall fescue, torenia, wheat, and white clover.

BENEFITS FROM BIOTECH CROPS

Australia is estimated to have enhanced farm income from biotech crops by US\$1 billion for the period 1996 to 2015, and the benefits for 2015 alone was estimated at US\$73 million.

CONCLUSION

Biotech crop adoption in Australia increased from 30% in 2015 to 36% in 2016, mostly from biotech cotton, which had a significant increase of 89% due to the introduction of Bollgard III/RR® Flex.

A slight decrease in planting was observed in biotech canola, however, adoption rates increased from 22% to 23%. With the lifting of the biotech crop planting moratorium in Western Australia, farmers who are planting conventional canola may shift to biotech in subsequent years. This will also

open doors to the development and adoption of other biotech crops and traits.

It is noteworthy that the South Australian (SA) grain growers have already petitioned the State Government to lift a similar moratorium imposed to them. The growers believe that they should have greater freedom of choice to grow the crop varieties which best fit their farming systems, as well as coincide with the basic free-market and right to farm principles.

SOURCE

ISAAA. 2016. Global Status of Commercialized Biotech/GM Crops: 2016. *ISAAA Brief No. 52*. ISAAA: Ithaca, New York.

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